

1. TRANSMITTED DATA

1-1 CHANNEL MESSAGES

Status (Hex)	Second (Hex)	Third (Hex)	Description	ENA
1000 nnnn (8n)	0kkk kkkk (kk)	0100 0000 (40)	Note Off kkk kkkk=10..119 (61Keys+Transpose)	A
1001 nnnn (9n)	0kkk kkkk (kk)	0vvv vvvv (vv)	Note On kkk kkkk=10..119 (61Keys+Transpose) vvv vvvv=1..127	A
1011 nnnn (Bn)	0000 0000 (00)	0mmmm mmmmm (mm)	Bank Select(MSB) (BANK Key, etc)	*1 P
1011 nnnn (Bn)	0000 0100 (04)	0000 0000 (00)	Foot Pedal (Select Main Scale)	C
1011 nnnn (Bn)	0000 0100 (04)	0111 1111 (7F)	Foot Pedal (Select Sub Scale)	C
1011 nnnn (Bn)	0000 0111 (07)	0vvv vvvv (vv)	Volume	C
1011 nnnn (Bn)	0000 1010 (0A)	0vvv vvvv (vv)	Panpot (by A:B Panpot)	C
1011 nnnn (Bn)	0010 0000 (20)	0111 1111 (11)	Bank Select(LSB) (BANK Key, etc)	*1 P
1011 nnnn (Bn)	0100 0000 (40)	0vvv vvvv (vv)	Damper Pedal (Hold1)	C
1011 nnnn (Bn)	0100 0010 (42)	0vvv vvvv (vv)	Sostenute Pedal	C
1011 nnnn (Bn)	0100 0011 (43)	0vvv vvvv (vv)	Soft Pedal	C
1011 nnnn (Bn)	0ccc cccc (cc)	0vvv vvvv (vv)	Control Data (Recorded Data or SMF) ccc cccc=00..127	C,Q
1100 nnnn (Cn)	0ppp pppp (pp)	---- ----	Program Change (Prog Change)	*1 P
1101 nnnn (Dn)	0vvv vvvv (vv)	---- ----	Channel Pressure (Recorded Data or SMF)	T
1110 nnnn (En)	0bbb bbbb (bb)	0bbb bbbb (bb)	Pitch Bend (Recorded Data or SMF)	C

nnnn : MIDI Channel Number(0-15) Usually Keyboard Channel. When using recorder or play SMF, each track's channel.

vvvv : Value

ENA = A : Always Enabled

C : Enabled when Control Filter in FUNCTION is ENA

P : Enabled when Program Filter in FUNCTION is ENA

T : Enabled when Aftertouch Filter in FUNCTION is ENA

Q : Enabled when recorder is playing (transmitting) or recording (receiving)

T,Q: T and Q

C,Q: C and Q

*1 : Program : MIDI Out (Hex)

For example

mm=00: Transmit B0,00,00

ll=02: Transmit B0,20,02

pp=1F: Transmit C0,1F

1-2 SYSTEM REALTIME MESSAGES

Status (Hex)	Description	
1111 1000 (F8)	Timing Clock	*1
1111 1010 (FA)	Start	*1
1111 1011 (FB)	Continue	*1
1111 1100 (FC)	Stop	*1
1111 1110 (FE)	Active Sensing	*2

*1 : Transmits when Internal Clock

*2 : Transmits when External Clock

1-3 UNIVERSAL SYSTEM EXCLUSIVE MESSAGES (DEVICE INQUIRY REPLY)

Byte (Hex)	Description
1111 0000 (F0)	Exclusive Status
0111 1110 (7E)	Non Realtime Message
0000 gggg (0g)	MIDI Keyboard Channel
0000 0110 (06)	Inquiry Message
0000 0010 (02)	Identity Reply
0100 0010 (42)	KORG ID (Manufactures ID)
0011 1001 (39)	i-series ID (Family Code LSB)

0000 0000 (00)	(Family Code MSB)
0000 0110 (06)	(Member Code LSB)
0000 0000 (00)	(Member Code MSB)
0*** **** (**)	Firmware Number (Minor Version LSB)
0000 0000 (00)	(Minor Version MSB)
0*** **** (**)	Specification Number (Major Version LSB)
0000 0000 (00)	(Major Version MSB)
1111 0111 (F7)	END OF EXCLUSIVE

-----+
Transmits when INQUIRY MESSAGE REQUEST Received
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2. RECOGNIZED RECEIVE DATA

2-1 CHANNEL MESSAGES

Status (Hex)	Second (Hex)	Third (Hex)	Description	ENA
1000 nnnn (8n)	0kkk kkkk (kk)	0xxx xxxx (xx)	Note Off	A
1001 nnnn (9n)	0kkk kkkk (kk)	0000 0000 (00)	Note Off	A
1001 nnnn (9n)	0kkk kkkk (kk)	0vvv vvvv (vv)	Note On	A
			vvv vvvv=1..127	
1010 nnnn (An)	0kkk kkkk (kk)	0vvv vvvv (vv)	Poly Key Pressure (ignore kk)	T,Q
1011 nnnn (Bn)	0000 0000 (00)	0mmmm mmmmm (mm)	Bank Select(MSB)	*1 P
1011 nnnn (Bn)	0000 0001 (01)	0vvv vvvv (vv)	Modulation1 Depth (Pitch Modulation)	C
1011 nnnn (Bn)	0000 0010 (02)	0vvv vvvv (vv)	Modulation2 Depth (Cutoff Modulation)	C
1011 nnnn (Bn)	0000 0100 (04)	00vv vvvv(<40)	Foot Pedal Off (Select Main Scale)	C
1011 nnnn (Bn)	0000 0100 (04)	01vv vvvv(>3F)	Foot Pedal On (Select Sub Scale)	C
1011 nnnn (Bn)	0000 0110 (06)	0vvv vvvv (vv)	Data Entry (MSB) (For RPN Edit)	C
1011 nnnn (Bn)	0000 0111 (07)	0vvv vvvv (vv)	Volume	C
1011 nnnn (Bn)	0000 1010 (0A)	0vvv vvvv (vv)	Panpot (Panpot)	C
1011 nnnn (Bn)	0000 1011 (0B)	0vvv vvvv (vv)	Expression	C
1011 nnnn (Bn)	0010 0000 (20)	0111 1111 (11)	Bank Select(LSB)	*1 P
1011 nnnn (Bn)	0010 0110 (26)	0vvv vvvv (vv)	Data Entry (LSB) (For RPN Edit)	C
1011 nnnn (Bn)	0100 0000 (40)	0vvv vvvv (vv)	Damper Pedal (Hold1)	C
1011 nnnn (Bn)	0100 0010 (42)	0vvv vvvv (vv)	Sostenute Pedal	C
1011 nnnn (Bn)	0100 0011 (43)	0vvv vvvv (vv)	Soft Pedal	C
1011 nnnn (Bn)	0101 1011 (5B)	0vvv vvvv (vv)	Reverb Level	*4 C
1011 gggg (Bg)	0101 1100 (5C)	0000 0000 (00)	Reverb On/Off (Off)	C
1011 gggg (Bg)	0101 1100 (5C)	0xxx xxxx(>00)	Reverb On/Off (On)	C
1011 nnnn (Bn)	0101 1101 (5D)	0vvv vvvv (vv)	Chorus Level	*4 C
1011 gggg (Bg)	0101 1110 (5E)	0000 0000 (00)	Chorus On/Off (Off)	C
1011 gggg (Bg)	0101 1110 (5E)	0xxx xxxx(>00)	Chorus On/Off (On)	C
1011 nnnn (Bn)	0110 0000 (60)	0000 0000 (00)	DATA Increment (For RPN Edit)	C
1011 nnnn (Bn)	0110 0001 (61)	0000 0000 (00)	DATA Decrement (For RPN Edit)	C
1011 nnnn (Bn)	0110 0100 (64)	0000 00rr (0r)	RPN Parameter Number (LSB)	*3 A
1011 nnnn (Bn)	0110 0101 (65)	0000 0000 (00)	RPN Parameter Number (MSB)	*3 A
1011 nnnn (Bn)	0111 1000 (78)	0000 0000 (00)	All Sound Off	C
1011 nnnn (Bn)	0111 1001 (79)	0000 0000 (00)	Reset All Controllers	C
1011 nnnn (Bn)	0ccc cccc (cc)	0vvv vvvv (vv)	Control Data (For Recording)	C,Q
			ccc cccc=00..127	
1011 gggg (Bg)	0111 1010 (7A)	0000 0000 (00)	Local Control Off	A
1011 gggg (Bg)	0111 1010 (7A)	0111 1111 (7F)	Local Control On	A

1011 nnnn (Bn)	0111 1011 (7B)	0000 0000 (00)	All Notes Off	A
1011 nnnn (Bn)	0111 1100 (7C)	0000 0000 (00)	Omni Mode Off/On (All Notes Off)	A
1011 nnnn (Bn)	0111 1101 (7D)	0000 0000 (00)	Omni Mode Off/On (All Notes Off)	A
1011 nnnn (Bn)	0111 1110 (7E)	000m mmmmm(<11)	Mono Mode On (All Notes Off)	A
			m mmmmm=0..16	
1011 nnnn (Bn)	0111 1111 (7F)	0000 0000 (00)	Poly mode On (All Notes Off)	A
1100 nnnn (Cn)	0ppp pppp (pp)	---- ----	Program Change *1,*2	P
1101 nnnn (Dn)	0vvv vvvv (vv)	---- ----	Channel Pressure (Aftertouch)	T
1110 nnnn (En)	0bbb bbbb (bb)	0bbb bbbb (bb)	Bender Change (Pitch Bend)	C

nnnn : MIDI Channel Number(0-15)

gggg : Always Keyboard Channel Number(0-15)

ENA : Same as TRANSMITTED DATA

*1 :For example

Received data:B0,00,38,B0,20,02,C0,1F

mm=38

ll=02

pp=1F

Note) mm,ll,pp

00,04,00	:GM Kit1
00,04,01	:GM Kit2
00,04,02..07	:GM Kit1
00,04,08..0F	:Room Kit
00,04,10..17	:Power Kit
00,04,18	:Electronic Kit
00,04,19	:Analog Kit
00,04,1A	:Dance Kit
00,04,1B..1F	:Electronic Kit
00,04,20..27	:Jazz Kit
00,04,28..2F	:Brush Kit
00,04,30..37	:Orchestra Kit
00,04,38..3F	:SFX Kit
00,04,40	:Percussion Kit
00,04,41	:Latin Perc.Kit
00,04,42..47	:Percussion Kit
00,04,48	:User/Disk(Techno Kit)
00,04,49	:User/Disk(Rock Kit)
00,04,4A..73	:GM Kit
00,04,74	:Arabian Kit
00,04,75..7F	:GM Kit
38,xx,00..7F	:same program as mm=0,ll=0 (GM program)
39,xx,00..7F	:same program as mm=0,ll=0 (GM program)
3E,xx,00..7F	:same program as mm=0,ll=4 (Drum Kit program)

xx : Any number

*3 : rr = 0 : Pitch Bend Sensitivity
 = 1 : Fine Tune (When Received Ch = Keyboard Ch, Master Tune)
 = 2 : Coarse Tune (Transpose)

*4 : without Keyboard part

2-2 SYSTEM REALTIME MESSAGES

Status (Hex)	Description	
1111 1000 (F8)	Timing Clock	*5
1111 1010 (FA)	Start	*5
1111 1011 (FB)	Continue	*5
1111 1100 (FC)	Stop	*5
1111 1110 (FE)	Active Sensing	

*5 : Received when use Recorder (External Clock)

2-4 UNIVERSAL SYSTEM EXCLUSIVE MESSAGE (NON REALTIME)

Byte (Hex)	Description	
1111 0000 (F0)	EXCLUSIVE STATUS	
0111 1110 (7E)	NON REALTIME MESSAGE	
0ggg gggg (gg)	MIDI CHANNEL	*6
0000 aaaa (0a)	SUB ID 1	*7
0000 00bb (0b)	SUB ID 2	*7
1111 0111 (F7)	END OF EXCLUSIVE	

*6 : gg = 0..F : Received if Keyboard Channel

= 7F : Received on any Channel

*7 : INQUIRY MESSAGE REQUEST :a=06,b=01
 : GENERAL MIDI MODE ON :a=09,b=01 (Received when play SMF)

2-5 UNIVERSAL SYSTEM EXCLUSIVE MESSAGE (REALTIME)

Byte (Hex)	Description	
1111 0000 (F0)	EXCLUSIVE STATUS	
0111 1111 (7F)	REALTIME MESSAGE	
0ggg gggg (gg)	MIDI CHANNEL	*6
0000 0100 (04)	SUB ID 1	
0000 00bb (0b)	SUB ID 2	*8
0vvv vvvv (vv)	VALUE(LSB)	*8
0mmmm mmmmm (mm)	VALUE(MSB)	*8
1111 0111 (F7)	END OF EXCLUSIVE	

*8 : b = 01 : MASTER VOLUME (mm,vv = 00,00..7F,7F : Min..Max)
 = 02 : MASTER BALANCE (mm,vv = 00,00..40,00..7F,7F : L..Center..R)